

## SEQUENCE LISTING

10/590691

<110> Lepistö, Matti  
Pawlowski, Kryzysztof

<120> Methods for Identifying Compounds Capable of Modulating the  
Hydrolase Activity of CLCA Protein

<130> 06275-519US1

<150> PCT/SE2005/000316  
2005-03-03

<150> SE 0400564-1

<151> 2004-03-05

<160> 44

<170> PatentIn version 3.1

<210> 1

<211> 302

<212> PRT

<213> Bos taurus

<400> 1

```

Ile Leu Phe Leu Thr Leu His Leu Leu Pro Gly Met Lys Ser Ser Met
1      5      10      15
Val Asn Leu Ile Asn Asn Gly Tyr Asp Gly Ile Val Ile Ala Ile Asn
      20      25      30
Pro Ser Val Pro Glu Asp Glu Lys Leu Ile Glu Asn Ile Lys Glu Met
      35      40      45
Val Thr Glu Ala Ser Thr Tyr Leu Phe His Ala Thr Lys Arg Arg Val
      50      55      60
Tyr Phe Arg Asn Val Ser Ile Leu Ile Pro Met Thr Trp Lys Ser Lys
65      70      75      80
Ser Glu Tyr Phe Ile Pro Lys Gln Glu Ser Tyr Asp Gln Ala Asp Val
      85      90      95
Ile Val Ala Asn Pro Tyr Leu Lys Tyr Gly Asp Asp Pro Tyr Thr Leu
      100     105     110
Gln Tyr Gly Arg Cys Gly Glu Lys Gly Lys Tyr Ile His Phe Thr Pro
      115     120     125
Asn Phe Leu Leu Thr Asn Asn Phe His Ile Tyr Gly Ser Arg Gly Arg
      130     135     140
Val Phe Val His Glu Trp Ala His Leu Arg Trp Gly Ile Phe Asp Glu
145     150     155     160
Tyr Asn Val Asp Gln Pro Phe Tyr Ile Ser Arg Lys Asn Thr Ile Glu
      165     170     175
Ala Thr Arg Cys Ser Thr His Ile Thr Gly Ile Asn Val Val Phe Lys
      180     185     190
Lys Cys Pro Gly Gly Ser Cys Ile Thr Ser Leu Cys Arg Arg Asp Ser
      195     200     205
Gln Thr Gly Leu Tyr Glu Ala Lys Cys Thr Phe Leu Pro Lys Lys Ser
      210     215     220
Gln Thr Ala Lys Glu Ser Ile Met Phe Met Pro Ser Leu His Ser Val
225     230     235     240

```

```

Thr Glu Phe Cys Thr Glu Lys Thr His Asn Thr Glu Ala Pro Asn Leu
      245                250                255
Gln Asn Lys Met Cys Asn Gly Lys Ser Thr Trp Asp Val Ile Met Asn
      260                265                270
Ser Val Asp Phe Gln Asn Thr Ser Pro Met Thr Glu Met Asn Pro Pro
      275                280                285
Thr His Pro Thr Phe Ser Leu Leu Lys Ser Lys Gln Arg Val
      290                295                300

```

```

<210> 2
<211> 306
<212> PRT
<213> Homo sapiens

```

```

<400> 2
Met Gly Pro Phe Lys Ser Ser Val Phe Ile Leu Ile Leu His Leu Leu
1      5      10      15
Glu Gly Ala Leu Ser Asn Ser Leu Ile Gln Leu Asn Asn Asn Gly Tyr
      20      25      30
Glu Gly Ile Val Val Ala Ile Asp Pro Asn Val Pro Glu Asp Glu Thr
      35      40      45
Leu Ile Gln Gln Ile Lys Asp Met Val Thr Gln Ala Ser Leu Tyr Leu
      50      55      60
Phe Glu Ala Thr Gly Lys Arg Phe Tyr Phe Lys Asn Val Ala Ile Leu
65      70      75      80
Ile Pro Glu Thr Trp Lys Thr Lys Ala Asp Tyr Val Arg Pro Lys Leu
      85      90      95
Glu Thr Tyr Lys Asn Ala Asp Val Leu Val Ala Glu Ser Thr Pro Pro
      100     105     110
Gly Asn Asp Glu Pro Tyr Thr Glu Gln Met Gly Asn Cys Gly Glu Lys
      115     120     125
Gly Glu Arg Ile His Leu Thr Pro Asp Phe Ile Ala Gly Lys Lys Leu
      130     135     140
Ala Glu Tyr Gly Pro Gln Gly Lys Ala Phe Val His Glu Trp Ala His
145     150     155     160
Leu Arg Trp Gly Val Phe Asp Glu Tyr Asn Asn Asp Glu Lys Phe Tyr
      165     170     175
Leu Ser Asn Gly Arg Ile Gln Ala Val Arg Cys Ser Ala Gly Ile Thr
      180     185     190
Gly Thr Asn Val Val Lys Lys Cys Gln Gly Gly Ser Cys Tyr Thr Lys
      195     200     205
Arg Cys Thr Phe Asn Lys Val Thr Gly Leu Tyr Glu Lys Gly Cys Glu
      210     215     220
Phe Val Leu Gln Ser Arg Gln Thr Glu Lys Ala Ser Ile Met Phe Ala
225     230     235     240
Gln His Val Asp Ser Ile Val Glu Phe Cys Thr Glu Gln Asn His Asn
      245     250     255
Lys Glu Ala Pro Asn Lys Gln Asn Gln Lys Cys Asn Leu Arg Ser Thr
      260     265     270
Trp Glu Val Ile Arg Asp Ser Glu Asp Phe Lys Lys Thr Thr Pro Met
      275     280     285
Thr Thr Gln Pro Pro Asn Pro Thr Phe Ser Leu Leu Gln Ile Gly Gln
      290     295     300
Arg Ile
305

```

<210> 3  
 <211> 306  
 <212> PRT  
 <213> Homo sapiens

<400> 3  
 Met Gly Leu Phe Arg Gly Phe Val Phe Leu Leu Val Leu Cys Leu Leu  
 1 5 10 15  
 His Gln Ser Asn Thr Ser Phe Ile Lys Leu Asn Asn Asn Gly Phe Glu  
 20 25 30  
 Asp Ile Val Ile Val Ile Asp Pro Ser Val Pro Glu Asp Glu Lys Ile  
 35 40 45  
 Ile Glu Gln Ile Glu Asp Met Val Thr Thr Ala Ser Thr Tyr Leu Phe  
 50 55 60  
 Glu Ala Thr Glu Lys Arg Phe Phe Phe Lys Asn Val Ser Ile Leu Ile  
 65 70 75 80  
 Pro Glu Asn Trp Lys Glu Asn Pro Gln Tyr Lys Arg Pro Lys His Glu  
 85 90 95  
 Asn His Lys His Ala Asp Val Ile Val Ala Pro Pro Thr Leu Pro Gly  
 100 105 110  
 Arg Asp Glu Pro Tyr Thr Lys Gln Phe Thr Glu Cys Gly Glu Lys Gly  
 115 120 125  
 Glu Tyr Ile His Phe Thr Pro Asp Leu Leu Leu Gly Lys Lys Gln Asn  
 130 135 140  
 Glu Tyr Gly Pro Pro Gly Lys Leu Phe Val His Glu Trp Ala His Leu  
 145 150 155 160  
 Arg Trp Gly Val Phe Asp Glu Tyr Asn Glu Asp Gln Pro Phe Tyr Arg  
 165 170 175  
 Ala Lys Ser Lys Lys Ile Glu Ala Thr Arg Cys Ser Ala Gly Ile Ser  
 180 185 190  
 Gly Arg Asn Arg Val Tyr Lys Cys Gln Gly Gly Ser Cys Leu Ser Arg  
 195 200 205  
 Ala Cys Arg Ile Asp Ser Thr Thr Lys Leu Tyr Gly Lys Asp Cys Gln  
 210 215 220  
 Phe Phe Pro Asp Lys Val Gln Thr Glu Lys Ala Ser Ile Met Phe Met  
 225 230 235 240  
 Gln Ser Ile Asp Ser Val Val Glu Phe Cys Asn Glu Lys Thr His Asn  
 245 250 255  
 Gln Glu Ala Pro Ser Leu Gln Asn Ile Lys Cys Asn Phe Arg Ser Thr  
 260 265 270  
 Trp Glu Val Ile Ser Asn Ser Glu Asp Phe Lys Asn Thr Ile Pro Met  
 275 280 285  
 Val Thr Pro Pro Pro Pro Pro Val Phe Ser Leu Leu Lys Ile Arg Gln  
 290 295 300  
 Arg Ile  
 305

<210> 4  
 <211> 304  
 <212> PRT  
 <213> Homo sapiens

<400> 4  
 Gly Pro Ile Cys Asn Leu Lys Phe Val Thr Leu Leu Val Ala Leu Ser  
 1 5 10 15

```

Ser Glu Leu Pro Phe Leu Gly Ala Gly Val Gln Leu Gln Asp Asn Gly
      20      25      30
Tyr Asn Gly Leu Leu Ile Ala Ile Asn Pro Gln Val Pro Glu Asn Gln
      35      40      45
Asn Leu Ile Ser Asn Ile Lys Glu Met Ile Thr Glu Ala Ser Phe Tyr
      50      55      60
Leu Phe Asn Ala Thr Lys Arg Arg Val Phe Phe Arg Asn Ile Lys Ile
      65      70      75      80
Leu Ile Pro Ala Thr Trp Lys Ala Asn Asn Asn Ser Lys Ile Lys Gln
      85      90      95
Glu Ser Tyr Glu Lys Ala Asn Val Ile Val Thr Asp Trp Tyr Gly Ala
      100      105      110
His Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Arg Gly Cys Gly Lys Glu
      115      120      125
Gly Lys Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Asn Asp Asn Leu
      130      135      140
Thr Ala Gly Tyr Gly Ser Arg Gly Arg Val Phe Val His Glu Trp Ala
      145      150      155      160
His Leu Arg Trp Gly Val Phe Asp Glu Tyr Ile Asn Asp Lys Pro Phe
      165      170      175
Tyr Ile Asn Gly Gln Asn Gln Ile Lys Val Thr Arg Cys Ser Ser Asp
      180      185      190
Ile Thr Gly Ile Phe Val Cys Glu Lys Gly Pro Cys Pro Gln Glu Asn
      195      200      205
Cys Ile Ile Ser Lys Leu Phe Lys Glu Gly Cys Thr Phe Ile Tyr Asn
      210      215      220
Ser Thr Gln Asn Ala Thr Ala Ser Ile Met Phe Met Gln Ser Leu Ser
      225      230      235      240
Ser Val Val Glu Phe Cys Asn Ala Ser Thr His Asn Gln Glu Ala Pro
      245      250      255
Asn Leu Gln Asn Gln Met Cys Ser Leu Arg Ser Ala Trp Asp Val Ile
      260      265      270
Thr Asp Ser Ala Asp Phe His His Ser Phe Pro Met Asn Gly Thr Glu
      275      280      285
Leu Pro Pro Pro Pro Thr Phe Ser Leu Val Gln Ala Gly Asp Lys Val
      290      295      300

```

```

<210> 5
<211> 259
<212> PRT
<213> Homo sapiens

```

```

<400> 5
Phe Ser Leu Lys Val Ile Leu Phe Leu Ser Leu Leu Leu Ser Pro Val
1      5      10      15
Leu Lys Ser Ser Leu Val Thr Leu Asn Asn Asn Gly Tyr Asp Gly Ile
      20      25      30
Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp Glu Lys Leu Ile Gln
      35      40      45
Asn Ile Lys Glu Met Val Thr Glu Ala Ser Thr His Leu Phe His Ala
      50      55      60
Thr Lys Gln Arg Ala Tyr Phe Arg Asn Val Ser Ile Leu Ile Pro Met
      65      70      75      80
Thr Tyr Lys Ser Lys Ser Glu Tyr Leu Ile Pro Lys Gln Glu Thr Tyr
      85      90      95
Asp Gln Ala Asp Val Ile Val Ala Asp Leu Tyr Leu Lys Tyr Gly Asp

```

[illegible]

```
<210> 6
<211> 279
<212> PRT
<213> Mus musculus
```

<400>	6																
Leu	Lys	Leu	Lys	Glu	Asn	Gly	Tyr	Asp	Gly	Leu	Leu	Val	Ala	Ile	Asn		
1				5					10					15			
Pro	Arg	Val	Pro	Glu	Asp	Leu	Lys	Leu	Ile	Thr	Asn	Ile	Lys	Glu	Met		
			20					25					30				
Ile	Thr	Glu	Ala	Ser	Phe	Tyr	Leu	Phe	Asn	Ala	Thr	Lys	Arg	Arg	Val		
		35					40					45					
Phe	Phe	Arg	Asn	Val	Gln	Ile	Leu	Val	Pro	Ala	Thr	Trp	Thr	Asp	His		
	50					55					60						
Asn	Tyr	Ser	Arg	Val	Arg	Gln	Glu	Ser	Tyr	Asp	Lys	Ala	Asn	Val	Ile		
65					70					75					80		
Val	Ala	Glu	Gln	Ser	Glu	Glu	His	Gly	Asp	Pro	Tyr	Thr	Leu	Gln			
				85					90					95			
His	Arg	Gly	Cys	Gly	Gln	Glu	Gly	Arg	Tyr	Ile	His	Phe	Thr	Pro	Ser		
			100					105					110				
Phe	Leu	Leu	Asn	Asp	Glu	Leu	Ala	Ala	Gly	Tyr	Gly	Ala	Arg	Gly	Arg		
		115					120					125					
Val	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe	Asp	Glu		
	130					135					140						
Tyr	Asn	Asn	Asp	Lys	Pro	Phe	Tyr	Val	Asn	Gly	Arg	Asn	Glu	Ile	Gln		
145					150					155					160		
Val	Thr	Arg	Cys	Ser	Ser	Asp	Ile	Thr	Gly	Val	Phe	Val	Cys	Glu	Lys		
				165					170					175			
Gly	Leu	Cys	Pro	His	Glu	Asp	Cys	Ile	Ile	Ser	Lys	Ile	Phe	Arg	Glu		
			180					185					190				
Gly	Cys	Thr	Phe	Leu	Tyr	Asn	Ser	Thr	Gln	Asn	Ala	Thr	Gly	Ser	Ile		
		195					200					205					
Met	Phe	Met	Pro	Ser	Leu	Pro	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Ser		
	210					215					220						
Thr	His	Asn	Gln	Glu	Ala	Pro	Asn	Leu	Gln	Asn	Gln	Val	Cys	Ser	Leu		

2

<210> 8  
 <211> 308  
 <212> PRT  
 <213> Mus musculus

<400> 8  
 Met Val Pro Gly Leu Gln Val Leu Leu Phe Leu Thr Leu His Leu Leu  
 1 5 10 15  
 Gln Asn Thr Glu Ser Ser Met Val His Leu Asn Ser Asn Gly Tyr Glu  
 20 25 30  
 Gly Val Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp Glu Arg Leu  
 35 40 45  
 Ile Pro Ser Ile Lys Glu Met Val Thr Gln Ala Ser Thr Tyr Leu Phe  
 50 55 60  
 Glu Ala Ser Gln Gly Arg Val Tyr Phe Arg Asn Ile Ser Ile Leu Val  
 65 70 75 80  
 Pro Met Thr Trp Lys Ser Lys Ser Glu Tyr Leu Met Pro Lys Arg Glu  
 85 90 95  
 Ser Tyr Asp Lys Ala Asp Val Ile Val Ala Asp Pro His Leu Gln His  
 100 105 110  
 Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Gly Gln Cys Gly Asp Arg Gly  
 115 120 125  
 Gln Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Thr Asp Asn Leu Arg  
 130 135 140  
 Ile Tyr Gly Pro Arg Gly Arg Val Phe Val His Glu Trp Ala His Leu  
 145 150 155 160  
 Arg Trp Gly Val Phe Asp Glu Tyr Asn Val Asp Arg Pro Phe Tyr Ile  
 165 170 175  
 Ser Arg Lys Asn Thr Ile Glu Ala Thr Arg Cys Ser Ala Ser Ile Thr  
 180 185 190  
 Gly Lys Lys Val Val His Glu Cys Gln Arg Gly Ser Cys Val Thr Arg  
 195 200 205  
 Ala Cys Arg Arg Asp Ser Lys Thr Arg Leu Tyr Glu Pro Lys Cys Thr  
 210 215 220  
 Phe Ile Pro Asp Lys Ile Gln Thr Ala Gly Ala Ser Ile Met Phe Met  
 225 230 235 240  
 Gln Asn Leu Asn Ser Val Val Glu Phe Cys Thr Glu Asn Asn His Asn  
 245 250 255  
 Ala Glu Ala Pro Asn Leu Gln Asn Lys Met Cys Asn Arg Arg Ser Thr  
 260 265 270  
 Trp Asp Val Ile Lys Ala Ser Ala Asp Phe Gln Asn Ser Pro Pro Met  
 275 280 285  
 Arg Gly Thr Glu Ala Pro Pro Pro Pro Thr Phe Ser Leu Leu Lys Ser  
 290 295 300  
 Arg Arg Arg Val  
 305

<210> 9  
 <211> 307  
 <212> PRT  
 <213> Mus musculus

<400> 9  
 Met Glu Ser Leu Lys Ser Pro Val Phe Leu Leu Ile Leu His Leu Leu  
 1 5 10 15  
 Glu Gly Val Leu Ser Glu Ser Leu Ile Gln Leu Asn Asn Asn Gly Tyr





Ser Tyr Asp Gln Ala Asp Val Ile Val Ala Asp Pro His Leu Gln His  
 100 105 110  
 Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Gly Gln Cys Gly Asp Arg Gly  
 115 120 125  
 Gln Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Thr Asp Asn Leu Gly  
 130 135 140  
 Ile Tyr Gly Pro Arg Gly Arg Val Phe Val His Glu Trp Ala His Leu  
 145 150 155 160  
 Arg Trp Gly Val Phe Asp Glu Tyr Asn Met Asp Arg Pro Phe Tyr Met  
 165 170 175  
 Ser Arg Lys Asn Thr Val Glu Ala Thr Arg Cys Ser Thr Asp Ile Thr  
 180 185 190  
 Gly Thr Ser Val Val Arg Glu Cys Gln Gly Gly Ser Cys Val Ser Arg  
 195 200 205  
 Arg Cys Arg Arg Asp Ala Lys Thr Gly Met Gln Glu Ala Lys Cys Thr  
 210 215 220  
 Phe Ile Pro Asn Lys Ser Gln Thr Ala Arg Gly Ser Ile Met Phe Met  
 225 230 235 240  
 Gln Ser Leu Asp Ser Val Val Glu Phe Cys Thr Glu Lys Thr His Asn  
 245 250 255  
 Val Glu Ala Pro Asn Leu Gln Asn Lys Met Cys Asn Leu Arg Ser Thr  
 260 265 270  
 Trp Asp Val Ile Lys Ala Ser Ala Asp Phe Gln Asn Ala Ser Pro Met  
 275 280 285  
 Thr Gly Thr Glu Ala Pro Pro Leu Pro Thr Phe Ser Leu Leu Lys Ser  
 290 295 300  
 Arg Gln Arg Val  
 305

<210> 11  
 <211> 306  
 <212> PRT  
 <213> Sus scrofa

<400> 11  
 Met Gly Ser Phe Arg Ser Ser Leu Phe Ile Leu Val Leu His Leu Leu  
 1 5 10 15  
 Glu Gly Ala Gln Ser Asn Ser Leu Ile Gln Leu Asn Gly Asn Gly Tyr  
 20 25 30  
 Glu Gly Ile Val Ile Ala Ile Asp Pro Asn Val Pro Glu Asp Glu Arg  
 35 40 45  
 Leu Ile Gln Asn Ile Lys Asp Met Val Thr Lys Ala Ser Pro Tyr Leu  
 50 55 60  
 Phe Glu Ala Thr Glu Lys Arg Phe Tyr Phe Lys Asn Val Ala Ile Leu  
 65 70 75 80  
 Ile Pro Ala Ser Trp Lys Ala Lys Pro Glu Tyr Val Lys Pro Lys Leu  
 85 90 95  
 Glu Thr Tyr Lys Asn Ala Asp Val Val Thr Glu Pro Asn Pro Pro  
 100 105 110  
 Glu Asn Asp Gly Pro Tyr Thr Glu Gln Met Gly Asn Cys Gly Glu Lys  
 115 120 125  
 Gly Glu Lys Ile Tyr Phe Thr Pro Asp Phe Val Ala Gly Lys Lys Val  
 130 135 140  
 Leu Gln Tyr Gly Pro Gln Gly Arg Val Phe Val His Glu Trp Ala His  
 145 150 155 160  
 Leu Arg Trp Gly Val Phe Asn Glu Tyr Asn Asn Glu Gln Lys Phe Tyr

```

165      170      175
Leu Ser Asn Lys Lys Glu Gln Pro Val Ile Cys Ser Ala Ala Ile Arg
180      185      190
Gly Thr Asn Val Leu Pro Gln Cys Gln Gly Gly Ser Cys Val Thr Lys
195      200      205
Pro Cys Arg Ala Asp Arg Val Thr Gly Leu Phe Gln Lys Glu Cys Glu
210      215      220
Phe Ile Pro Asp Pro Gln Gln Ser Glu Lys Ala Ser Ile Met Phe Ala
225      230      235
Gln Ser Ile Asp Thr Val Val Glu Phe Cys Lys Glu Lys Asn His Asn
245      250      255
Lys Glu Ala Pro Asn Asp Gln Asn Gln Lys Cys Asn Leu Arg Ser Thr
260      265      270
Trp Glu Val Ile Gln Asp Ser Glu Asp Phe Lys Lys Thr Thr Pro Met
275      280      285
Thr Thr Gln Pro Pro Ala Pro Thr Phe Ser Leu Leu Gln Ile Gly Gln
290      295      300
Arg Ile
305

```

```

<210> 12
<211> 308
<212> PRT
<213> Bos taurus

```

```

<400> 12
Met Val Pro Arg Leu Thr Val Ile Leu Phe Leu Thr Leu His Leu Leu
1      5      10      15
Pro Gly Met Lys Ser Ser Met Val Asn Leu Ile Asn Asn Gly Tyr Asp
20      25      30
Gly Ile Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp Glu Lys Leu
35      40      45
Ile Gln Asn Ile Lys Glu Met Val Thr Glu Ala Ser Thr Tyr Leu Phe
50      55      60
His Ala Thr Lys Arg Arg Val Tyr Phe Arg Asn Val Ser Ile Leu Ile
65      70      75      80
Pro Met Thr Trp Lys Ser Lys Ser Glu Tyr Leu Met Pro Lys Gln Glu
85      90      95
Ser Tyr Asp Gln Ala Glu Val Ile Val Ala Asn Pro Tyr Leu Lys His
100      105      110
Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Gly Arg Cys Gly Glu Lys Gly
115      120      125
Gln Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Thr Asn Asn Leu Pro
130      135      140
Ile Tyr Gly Ser Arg Gly Arg Ala Phe Val His Glu Trp Ala His Leu
145      150      155      160
Arg Trp Gly Ile Phe Asp Glu Tyr Asn Gly Asp Gln Pro Phe Tyr Ile
165      170      175
Ser Arg Arg Asn Thr Ile Glu Ala Thr Arg Cys Ser Thr His Ile Thr
180      185      190
Gly Thr Asn Val Ile Val Lys Cys Gln Gly Gly Ser Cys Ile Thr Arg
195      200      205
Pro Cys Arg Arg Asp Ser Gln Thr Gly Leu Tyr Glu Ala Lys Cys Thr
210      215      220
Phe Ile Pro Glu Lys Ser Gln Thr Ala Arg Glu Ser Ile Met Phe Met
225      230      235      240

```

Gln Ser Leu His Ser Val Thr Glu Phe Cys Thr Glu Lys Thr His Asn  
 245 250 255  
 Val Glu Ala Pro Asn Leu Gln Asn Lys Met Cys Asn Gly Lys Ser Thr  
 260 265 270  
 Trp Asp Val Ile Met Asn Ser Thr Asp Phe Gln Asn Thr Ser Pro Met  
 275 280 285  
 Thr Glu Met Asn Pro Pro Thr Gln Pro Thr Phe Ser Leu Leu Lys Ser  
 290 295 300  
 Lys Gln Arg Val  
 305

<210> 13  
 <211> 247  
 <212> PRT  
 <213> Ciona intestinalis

<400> 13  
 Glu Ser Thr Thr Leu Leu Asn Ser Ile Lys Ala Ala Trp Thr Glu Ala  
 1 5 10 15  
 Ser Ala Ala Leu Tyr Thr Ala Thr Arg Lys Arg Ala Tyr Phe Gly Asn  
 20 25 30  
 Ile Thr Ile Leu Val Pro Lys Ser Trp Asn Gly Thr Tyr Lys Arg Ala  
 35 40 45  
 Phe Asp Glu Thr Tyr Asp Ala Ala Asp Val Val Val Thr Asn Thr Asn  
 50 55 60  
 Arg Val Arg Gly Asn Ile Pro Tyr Val Leu Gln Pro Gly Gly Cys Gly  
 65 70 75 80  
 Glu Pro Gly Thr Arg Ile Phe Thr Thr Arg Asp Tyr Tyr Thr Asn Asp  
 85 90 95  
 Thr Tyr Val Glu Ser Phe Gly Gln Arg Gly Lys Val Met Val His Glu  
 100 105 110  
 Trp Ser His Tyr Arg Trp Gly Val Phe Asp Glu Ile Ala Ser Gly Asp  
 115 120 125  
 Tyr Ala Pro Phe Tyr Ile Ser Ser Thr Gly Thr Ile Glu Ala Thr Arg  
 130 135 140  
 Cys Ser Leu Gly Ile Gln Gly Glu Asn Met Ile Val Gln Asn Asn Glu  
 145 150 155 160  
 Ile Val Gln Asp Val Cys Asn Tyr Asp Pro Gln Thr Leu Leu Pro Asn  
 165 170 175  
 Ser Thr Asp Cys Lys Phe Ile Leu Ala Trp Asp Gln Asp Leu Asp Leu  
 180 185 190  
 Lys Ala Ser Ile Met Ser Tyr Gln Tyr Val Asn Glu Ile Asn Gly Phe  
 195 200 205  
 Cys Asp Asp Asn Asp Asn Asp Pro Leu Asn Arg His Asn Arg Glu Ala  
 210 215 220  
 Pro Asn Glu His Asn Asp Lys Cys Asn Lys Arg Ser Val Trp Asp Val  
 225 230 235 240  
 Ile Thr Ser Ser Val Asp Phe  
 245

<210> 14  
 <211> 274  
 <212> PRT  
 <213> Ciona intestinalis

<220>  
 <221> MISC\_FEATURE  
 <222> 49  
 <223> any natural amino acid residue

<220>  
 <221> MISC\_FEATURE  
 <222> 263  
 <223> any natural amino acid residue

<400> 14  
 Asn Pro Ala Val Pro Glu Asp Pro Asn Leu Val Ser Ala Ile Gln Ser  
 1 5 10 15  
 Ser Trp Ile Glu Ala Ser Gly Asp Leu Tyr Thr Ala Thr Arg Gln Arg  
 20 25 30  
 Ser Tyr Phe Gly Glu Ile Thr Ile Leu Ile Pro Lys Thr Trp Ser Lys  
 35 40 45  
 Xaa Lys Leu Val Ile Asn Gly Ser Glu Ser Tyr Glu Thr Ala Asp Val  
 50 55 60  
 Leu Ile Ala Glu Ala Asn Pro Val Tyr Gln Asp Thr Pro Tyr Thr Leu  
 65 70 75 80  
 Gln Tyr Gly Asn Cys Gly Glu Thr Ala Ser Tyr Ile His Leu Thr Pro  
 85 90 95  
 Asp Tyr Leu Thr Asn Gln Ser Phe Val Glu Asp Phe Gly Pro Arg Gly  
 100 105 110  
 Lys Ala Ile Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe Asp  
 115 120 125  
 Glu Thr Tyr Thr Thr Gly Tyr Ser Pro Tyr Tyr Tyr Asp Ser His Gly  
 130 135 140  
 Thr Val Gln Ala Thr Arg Cys Pro Ser Thr Leu Asp Gly Lys Asn Lys  
 145 150 155 160  
 Val Val Asp Tyr Ser Thr Gly Asn Ser Arg Asp Cys Gln Arg Asn Leu  
 165 170 175  
 Glu Asn Gly Leu Met Glu Asp Gly Cys Leu Phe Leu Pro Tyr Ala Glu  
 180 185 190  
 Gln Ser Ala Asp Leu Thr Thr Ser Leu Met Ser His Gln Tyr Leu Ser  
 195 200 205  
 Gln Val Thr Met Phe Cys His Asn Asp Glu Thr Asp Ser Tyr Asn His  
 210 215 220  
 His Asn Arg Glu Ala Pro Asn Glu Gln Asn Arg Leu Cys Asp Leu Lys  
 225 230 235 240  
 Ser Ala Trp Glu Val Ile Met Glu Ser Lys Asp Phe Leu Asn Asn Ala  
 245 250 255  
 Asn Pro Arg Asn Met Val Xaa Asn Thr Asn Pro Ile Phe Arg Leu Val  
 260 265 270  
 Gln Ile

<210> 15  
 <211> 282  
 <212> PRT  
 <213> Ciona intestinalis

<400> 15  
 Val Thr Leu Val Asn Asn Gly Tyr Asp Gly Ile Val Val Ala Ile Asn  
 1 5 10 15  
 Pro Ala Val Ala Glu Asp Glu Thr Leu Ile Asn Lys Ile Arg Asn Met

2

2

2

Gly Lys Ala Leu Val His Glu Trp Ala His Leu Arg Trp Gly Val Tyr  
 130 135 140  
 Asp Glu Tyr Ala Ser Glu Gly Tyr Ala Pro Phe Tyr Tyr Ser Asn Arg  
 145 150 155 160  
 Gly Gly Gly Gln Pro Tyr Met Glu Ala Thr Arg Cys Pro Leu Ala Leu  
 165 170 175  
 Gly Gly Val Thr Arg Tyr Pro Asn Pro Ala Asn Gly Asn Gln Leu Glu  
 180 185 190  
 His Cys Thr Ser Asp Pro Asn Asn Asn Phe Leu Pro Leu Glu Gly Cys  
 195 200 205  
 Leu Phe Phe Pro Phe Ser Glu Leu Gly Gln Pro Asp Asp Leu Ser Ala  
 210 215 220  
 Ser Leu Leu Ser His Gln Phe Val Asp Gln Val Val Asp Phe Cys His  
 225 230 235 240  
 Asn Asp Thr Asn Asp Pro Thr Asn Leu His Asn Lys Glu Ala Pro Asn  
 245 250 255  
 Glu His Asn Arg Leu Cys Asp Gln Arg Ser Val Trp Glu Ile Met Met  
 260 265 270  
 Ala Ser Arg Asp Phe Asn Ala Val Asn His Pro Asn Pro Thr  
 275 280 285

<210> 17  
 <211> 273  
 <212> PRT  
 <213> Ciona intestinalis

<220>  
 <221> MISC\_FEATURE  
 <222> 267  
 <223> any natural amino acid residue

<400> 17  
 Val Thr Leu Val Gly Asn Lys Tyr Lys Gly Ile Val Val Ala Ile Asn  
 1 5 10 15  
 Pro Ser Ile Pro Glu Asp Gln Asp Leu Ile Asn Asn Ile Lys Ala Leu  
 20 25 30  
 Leu Asn Glu Ala Ser Pro Ile Leu Trp Ser Ala Thr Lys Asn Arg Ala  
 35 40 45  
 Tyr Phe Gly Glu Val Thr Ile Leu Val Pro Ser Thr Trp Thr Gly Ser  
 50 55 60  
 Tyr Thr Gln Ala Thr His Gly Gln Val Tyr Asn Lys Ala Asp Ile Ile  
 65 70 75 80  
 Val Ala Asp Pro Asn Pro Gln Tyr Met Asp Thr Pro Tyr Thr Ile Gln  
 85 90 95  
 Tyr Gln Gln Cys Gly Asp Pro Gly Glu Tyr Ile His Leu Thr Pro Asn  
 100 105 110  
 Phe Ile Asn Glu Lys Asn Asp Phe Val Glu Asn Tyr Gly Ser Lys Gly  
 115 120 125  
 Lys Ala Leu Val His Glu Trp Ala His Leu Arg Trp Gly Ile Tyr Asp  
 130 135 140  
 Glu Tyr Ala Ser Glu Gly Tyr Asp Pro Phe Tyr Tyr Ser Ser Thr Gln  
 145 150 155 160  
 Tyr Val Gln Pro Thr Leu Glu Ala Thr Arg Cys Pro Leu Ser Val Ala  
 165 170 175  
 Gly Met Met Leu Tyr Leu Asp Pro Leu Ser Gly Lys Phe Glu Phe Cys  
 180 185 190

Thr Ser Asn Pro Glu Asn Asn Phe Leu Pro Glu Glu Gly Cys Ile Phe  
           195                          200                          205  
 Phe Pro Arg Ser Lys Glu Gly Gln Pro Ala Asp Leu Ile Tyr Ser Phe  
           210                          215                          220  
 Ser Leu Thr Gln Val Val Asp Phe Cys His Asn Asp Thr Asn Asp Pro  
 225                          230                          235                          240  
 Thr Asn Leu His Asn Lys Glu Ala Pro Asn Glu His Asn Arg Leu Cys  
                           245                          250                          255  
 Asp Gln Arg Ser Val Trp Glu Val Met Asn Xaa Ser Ser Asp Phe Lys  
                           260                          265                          270  
 Gln

<210> 18  
 <211> 279  
 <212> PRT  
 <213> Ciona intestinalis

<400> 18  
 Val Lys Leu Gln Ser Asn Gly Tyr Asp Gly Val Leu Val Ala Ile Asn  
 1                          5                          10                          15  
 Pro Ala Val Pro Glu Asn Glu Thr Leu Ile Arg Asn Ile Arg Ala Ser  
                           20                          25                          30  
 Ile Asp Leu Ile Gly Ala Thr Ser Ser His Ser Leu Phe Ile Leu Thr  
                           35                          40                          45  
 Lys Lys Arg Ala Tyr Phe Arg Asn Ile Asn Ile Leu Val Pro Lys Thr  
                           50                          55                          60  
 Trp Thr Gly Ala Arg Tyr Asp Thr Ala Ile Gly Leu Ser Tyr Arg Lys  
 65                          70                          75                          80  
 Ala Asp Val Ile Val Ala Pro Ala Asn Ser Ala Lys Gly Asn Asn Pro  
                           85                          90                          95  
 Tyr Thr Arg Gln Thr Gly Gly Cys Gly Asp Pro Gly Thr Tyr Ile His  
                           100                          105                          110  
 Ile Thr Pro Glu Tyr Val Tyr Asn Pro Gln Glu His Leu Tyr Gly Pro  
                           115                          120                          125  
 Arg Gly Lys Lys Ala Ile Val His Glu Trp Ser His Leu Arg Trp Gly  
                           130                          135                          140  
 Val Phe Asp Glu Tyr Ala Thr Gly Asn His Lys Arg His Tyr Ile Asp  
 145                          150                          155                          160  
 Ser Asn Asn Ile Leu Gln Ala Thr Arg Cys Pro Leu Ser Leu Arg Gly  
                           165                          170                          175  
 Met Asn Ile Glu Tyr Ala Pro Pro Tyr Asn Thr Arg Cys Ala Val Asn  
                           180                          185                          190  
 Arg Ser Ser Leu Leu Pro Leu Thr Glu Asn Cys Tyr Phe Phe Pro Ala  
                           195                          200                          205  
 Ser Arg Gln Pro Arg Gly Leu Asn Ser Ser Met Met Ser Phe Ser Tyr  
                           210                          215                          220  
 Leu His Ser Val Glu Ala Phe Cys His Asn Asp Pro Asn Glu Pro Ile  
 225                          230                          235                          240  
 Asn Phe His Asn Ser Glu Ala Asp Asn Glu Gln Asn Ala Lys Cys Asn  
                           245                          250                          255  
 Leu Lys Ser Leu Trp Glu Val Ile Gly Ala Ser Pro Asp Phe Arg Glu  
                           260                          265                          270  
 Gly Ala Asn Pro Pro Asn Pro  
                           275

<210> 19  
 <211> 241  
 <212> PRT  
 <213> Danio rerio

<400> 19  
 Ser Val Phe Val Val Leu Trp Met Leu Leu Pro Tyr Pro Phe Thr Gly  
 1 5 10 15  
 Ile Lys Leu Asp Gly Gly Gly Tyr Val Asp Ile Ser Ile Ala Ile Gly  
 20 25 30  
 Ala Lys Val Lys Gln Asp Asp Thr Leu Ile Asp Lys Ile Lys Glu Met  
 35 40 45  
 Val Thr Asp Gly Ser Phe Tyr Leu Tyr His Ala Leu Asp Lys Lys Val  
 50 55 60  
 Tyr Leu Lys Asp Ala Thr Ile Leu Val Pro Ser Gln Trp Ser Cys Lys  
 65 70 75 80  
 Ser Cys Ser Ile Ala Arg Thr Glu Leu Phe Glu Lys Ala Gln Ile Lys  
 85 90 95  
 Ile Asp His Ala Lys Leu Met Glu Pro Arg Thr Lys Leu Tyr Gly Glu  
 100 105 110  
 Cys Gly Val Gly Gly Glu Tyr Ile His Phe Thr Pro Asp Phe Leu Leu  
 115 120 125  
 Asn Asp Ser Ala Ile Gln Met Tyr Gly Pro Arg Gly Lys Val Phe Leu  
 130 135 140  
 His Glu Trp Ala His Leu Arg Trp Gly Val Tyr Asp Glu Tyr Asn Glu  
 145 150 155 160  
 Glu Lys Pro Phe Tyr Leu Ser Asn Gly Arg Val Glu Tyr Thr Arg Cys  
 165 170 175  
 Thr Thr Asn Ile Glu Gly Gln Cys Phe Glu Ile Asn Gly Gly Ser Leu  
 180 185 190  
 Gln Ser Cys Arg Ile Asn Pro Glu Thr Phe Leu Pro Ser Ser Asp Cys  
 195 200 205  
 Glu Leu Ser Pro Asn Lys Asp Gln Asn Thr Asp Ser Ser Val Met Cys  
 210 215 220  
 Ser Pro Ser Leu Gln Ser Leu Thr Thr Phe Cys Arg Glu Thr Glu His  
 225 230 235 240  
 Asn

<210> 20  
 <211> 268  
 <212> PRT  
 <213> Gallus gallus  
 <220>  
 <221> MISC\_FEATURE  
 <222> 39  
 <223> any natural amino acid residue

<220>  
 <221> MISC\_FEATURE  
 <222> 61  
 <223> any natural amino acid residue

<220>  
 <221> MISC\_FEATURE  
 <222> 65  
 <223> any natural amino acid residue



<220>  
 <221> MISC\_FEATURE  
 <222> 77  
 <223> any natural amino acid residue

<220>  
 <221> MISC\_FEATURE  
 <222> 168  
 <223> any natural amino acid residue

<220>  
 <221> MISC\_FEATURE  
 <222> 171  
 <223> any natural amino acid residue

<220>  
 <221> MISC\_FEATURE  
 <222> 172  
 <223> any natural amino acid residue

<220>  
 <221> MISC\_FEATURE  
 <222> 197  
 <223> any natural amino acid residue

<400> 20  
 Met Gly Val Phe Arg Ser Leu Ile Phe Leu Leu Ser Phe Gln Leu Leu  
 1 5 10 15  
 His Val Ala Lys Gly Ser Met Val Lys Leu Asn Glu Ser Gly Tyr Glu  
 20 25 30  
 Asp Leu Val Val Cys Asn Xaa Ser Gln Arg Asp Arg Arg Cys Gln His  
 35 40 45  
 His Pro Glu His Lys Gly Asn Asp Gln Arg Cys Phe Xaa Leu Phe Val  
 50 55 60  
 Xaa Ser Tyr Lys Thr Ser Ile Phe Leu Gln Ala Leu Xaa Arg Ile Ile  
 65 70 75 80  
 Leu Pro Lys Thr Trp Lys Lys Asn Ser Thr Tyr Ser Arg Leu Lys Thr  
 85 90 95  
 Glu Ser Tyr Asn Lys Ala Asp Val Ile Ile Ala Asp Pro Tyr Leu Lys  
 100 105 110  
 Tyr Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Gly Gly Cys Ala Met Lys  
 115 120 125  
 Gly Arg Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Asp Ser Ser Leu  
 130 135 140  
 Ile Lys Val Tyr Gly Glu Arg Gly Arg Val Leu Val His Glu Trp Ala  
 145 150 155 160  
 His Thr Ser Val Gly Cys Val Xaa Arg Ile Xaa Xaa Arg Arg Asn Leu  
 165 170 175  
 Phe Asp Val Ser Glu Asn Ala Arg Val Glu Pro Thr Arg Cys Ser Ala  
 180 185 190  
 Gly Val Thr Trp Xaa Thr Cys Ile Pro Lys Leu Gln Trp Lys Thr Val  
 195 200 205  
 Tyr Asp Lys Arg Met Pro Ser Met Met Val Ser Tyr Met Lys Leu Gly  
 210 215 220  
 Cys Gly Ile Gly Asn Gly Ser Ser Ile Lys Lys Arg Lys Asn Ser Ile  
 225 230 235 240  
 Met Tyr Met Gln Ser Leu Pro Ser Val Val Glu Ser Val Ile Lys Ile

		245		250		255
Leu	Ile	Asn	Ser	Glu	Val	Gln
				Met	Arg	Asn
		260		265		

<210> 21  
 <211> 192  
 <212> PRT  
 <213> Gallus gallus

<400> 21  
 Met Gly Val Phe Arg Ser Leu Ile Phe Leu Leu Ser Phe Gln Leu Leu  
 1 5 10 15  
 His Val Ala Lys Gly Ser Met Val Lys Leu Asn Glu Ser Gly Tyr Glu  
 20 25 30  
 Gly Leu Val Val Ala Ile Asn Pro Ser Val Thr Glu Asp Ala Asn Ile  
 35 40 45  
 Ile Leu Asn Thr Lys Ala Met Ile Lys Asp Ala Ser Asn Tyr Leu Phe  
 50 55 60  
 Glu Ala Thr Lys His Arg Phe Phe Phe Lys Ser Val Lys Ile Ile Leu  
 65 70 75 80  
 Pro Lys Thr Trp Lys Lys Asn Ser Thr Tyr Ser Arg Leu Lys Thr Glu  
 85 90 95  
 Ser Tyr Asn Lys Ala Asp Val Ile Ile Ala Asp Pro Tyr Leu Lys Tyr  
 100 105 110  
 Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Gly Gly Cys Ala Met Lys Gly  
 115 120 125  
 Arg Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Asp Ser Ser Leu Ile  
 130 135 140  
 Lys Val Tyr Gly Glu Arg Gly Arg Val Phe Val His Glu Trp Ala His  
 145 150 155 160  
 Leu Arg Trp Gly Val Phe Asp Glu Tyr Asn Asn Asp Ala Pro Phe Tyr  
 165 170 175  
 Val Ser Glu Asn Ala Arg Val Glu Pro Thr Arg Cys Ser Ala Gly Val  
 180 185 190

<210> 22  
 <211> 202  
 <212> PRT  
 <213> Salmo salar

<400> 22  
 Val Leu Leu Leu Val Tyr Leu Ser Gly Ser Thr Phe Gly Ile Lys Leu  
 1 5 10 15  
 Thr Gly Asn Gly Tyr Thr Asp Ile Leu Ile Ala Ile Asn Pro Val Val  
 20 25 30  
 Pro Glu Asp Pro Val Leu Ile Thr Gln Ile Glu Glu Met Ile Lys Glu  
 35 40 45  
 Ala Ser Arg His Leu Leu Asn Ala Thr Lys Lys His Leu Tyr Phe Lys  
 50 55 60  
 Glu Val Ala Ile Leu Val Pro Pro Asn Trp Asn Lys Gly Asn Tyr Ser  
 65 70 75 80  
 Lys Ala Lys Thr Glu Val Tyr Asn Lys Ala Asn Ile Ile Ile Asp Glu  
 85 90 95  
 Pro Asn Arg Leu His Gly Asp Gln Pro Tyr Thr Leu Gln Tyr Gly Glu  
 100 105 110

Cys Gly Ser Glu Gly Gln Tyr Ile His Leu Thr Pro Asp Phe Met Leu  
           115                          120                          125  
 Asn Asp Asp Val Ser Lys Tyr Tyr Gly Pro Arg Gly Lys Val Phe Val  
           130                          135                          140  
 His Glu Trp Ala His Leu Arg Trp Gly Val Phe Asp Glu Tyr Asn Glu  
 145                          150                          155                          160  
 Glu Lys Pro Phe Tyr Leu Ser Gly Ser Ile Ile Glu Ala Thr Arg Cys  
                           165                          170                          175  
 Thr Ile Asn Ile Thr Gly Lys Tyr Ile His Lys Arg Asp Gln Lys Asp  
                           180                          185                          190  
 Cys Thr Thr Asp Pro Val Thr Gly Leu Tyr  
           195                          200

<210> 23  
 <211> 202  
 <212> PRT  
 <213> Strongylocentrotus purpuratus

<220>  
 <221> MISC\_FEATURE  
 <222> 186  
 <223> any natural amino acid residue

<220>  
 <221> MISC\_FEATURE  
 <222> 192  
 <223> any natural amino acid residue

<400> 23  
 Asp Val Pro Glu Asp Gln Thr Ile Ile Asp Asn Leu Ile Asp Ile Phe  
 1                          5                          10                          15  
 Ser Ser Gly Ser Gly His Leu Phe Thr Ala Thr Arg Arg Arg Ala Tyr  
           20                          25                          30  
 Trp Arg Asn Ile Thr Ile Leu Ile Pro Lys Thr Trp Thr Pro Lys Pro  
           35                          40                          45  
 Glu Tyr Glu Pro Ala Arg Thr Glu Ser Phe Glu Thr Ala Asn Val Ile  
           50                          55                          60  
 Ile Asp Thr Ala Asn Pro Glu Trp Glu Asp Asn Pro Tyr Thr Leu Gln  
 65                          70                          75                          80  
 Leu Gly Gly Cys Gly Val His Gly Glu Tyr Ile His Leu Thr Pro Ser  
                           85                          90                          95  
 Tyr Ile Thr Asp Arg Ala Asn Ser Glu Tyr Ile Trp Gly Ser Met Gly  
           100                          105                          110  
 Lys Leu Leu Ile His Glu Trp Gly His Leu Arg Trp Gly Leu Phe Asp  
           115                          120                          125  
 Glu Tyr His Thr Asp Asp Asp Gly Val Gln Lys Phe Tyr Ala Asp Ser  
           130                          135                          140  
 Arg Gly Glu Ile Val Ala Thr Arg Cys Thr Asp Gln Leu Asn Gly Glu  
 145                          150                          155                          160  
 Ala Leu Asn Ile Asn Thr Phe Ala Pro Cys Gln Arg Asp Arg Asp Thr  
                           165                          170                          175  
 Gly Leu Tyr Glu Asp Asp Cys Phe Tyr Xaa Pro Asp Leu Glu Gly Xaa  
           180                          185                          190  
 Thr Ser Pro Gly Ser Ile Met Tyr Ala Gln  
           195                          200

<210> 24  
 <211> 192  
 <212> PRT  
 <213> Strongylocentrotus purpuratus

<400> 24  
 Gly Arg Ile Leu Met Ser Val Val Val Cys Cys Leu Val Leu Phe Ser  
 1 5 10 15  
 Gly Val Ser Gly Ser Asp Leu Arg Asn Ser Ile Thr Ile Gln Asp Gly  
 20 25 30  
 Gly Tyr Glu Asn Val Leu Ile Ala Ile Asn Lys Asp Val Pro Glu Asp  
 35 40 45  
 Gln Thr Ile Ile Asp Asn Leu Ile Asp Ile Phe Ser Ser Gly Ser Gly  
 50 55 60  
 His Leu Phe Thr Ala Thr Arg Arg Arg Ala Tyr Trp Arg Asn Ile Thr  
 65 70 75 80  
 Ile Leu Ile Pro Lys Thr Trp Thr Pro Lys Pro Glu Tyr Glu Pro Ala  
 85 90 95  
 Arg Thr Glu Ser Phe Glu Thr Ala Asn Val Ile Ile Asp Thr Ala Asn  
 100 105 110  
 Pro Glu Trp Glu Asp Asn Pro Tyr Thr Leu Gln Leu Gly Gly Cys Gly  
 115 120 125  
 Val His Gly Glu Tyr Ile His Leu Thr Pro Ser Tyr Ile Thr Asp Arg  
 130 135 140  
 Ala Asn Ser Glu Tyr Ile Trp Gly Ser Met Gly Lys Leu Leu Ile His  
 145 150 155 160  
 Glu Trp Ser His Leu Arg Trp Gly Leu Phe Asp Glu Tyr His Thr Asp  
 165 170 175  
 Asp Asp Gly Val Gln Lys Phe Tyr Ala Asp Ser Arg Gly Val Arg Ser  
 180 185 190

<210> 25  
 <211> 131  
 <212> PRT  
 <213> Strongylocentrotus purpuratus

<400> 25  
 Thr Ile Leu Leu Leu Glu Ile Phe Leu Val Glu Val Val Thr Gly Gln  
 1 5 10 15  
 Lys Asn Thr Ile Asn Leu Asn Asn Gly Ala Tyr Ser Asn Leu Leu Ile  
 20 25 30  
 Ala Ile Asp Lys Asn Val Ala Glu Asp Leu Asn Ile Ile Asp Asn Ile  
 35 40 45  
 Lys Thr Met Phe Thr Ser Ser Ser Glu Arg Leu Tyr Leu Ala Ser Lys  
 50 55 60  
 Gln His Val Tyr Trp Lys His Ile Lys Ile Leu Val Pro Asn Thr Trp  
 65 70 75 80  
 Ser Ile Gln Ser Gly Tyr Gln Phe Ser Arg Thr Glu Thr Leu Glu Ser  
 85 90 95  
 Ala Asn Ile Ile Leu His Asn Phe His Asp Asp Glu Pro Phe Val Asp  
 100 105 110  
 Asn Leu Ala Gly Cys Gly Lys Glu Gly Thr Leu Met His Met Thr Pro  
 115 120 125  
 Gly Tyr Ile  
 130

<210> 26  
 <211> 203  
 <212> PRT  
 <213> *Xenopus tropicalis*

<400> 26  
 Ala Ser Ser Tyr Leu Phe Gln Ala Thr Lys Lys Arg Leu Tyr Ile Arg  
 1 5 10 15  
 Ser Ala Lys Ile Leu Ile Pro Asn Thr Trp Ala Thr Asn Ser Ser Tyr  
 20 25 30  
 Gly Arg Pro Lys Leu Glu Ser Tyr Asp Lys Ala Asp Val Ile Val Ala  
 35 40 45  
 Pro Pro Phe Val Gln Gly Asp Asp Pro Tyr Thr Leu Gln Phe Gly Gly  
 50 55 60  
 Cys Gly Glu Lys Gly Lys Tyr Ile His Phe Thr Pro Asn Phe Leu Val  
 65 70 75 80  
 Asn Asp Glu Lys Met Leu Pro Ile Tyr Gly Pro Arg Gly Arg Val Phe  
 85 90 95  
 Val His Glu Trp Ala His Phe Arg Trp Gly Val Phe Asp Glu Tyr Asn  
 100 105 110  
 Tyr Asn Arg Pro Tyr Tyr Phe Ser Glu Asn Arg Lys Val Glu Ala Thr  
 115 120 125  
 Arg Cys Pro Leu Lys Leu Lys Gly Leu Asn Leu Ile Asp Val Cys Gln  
 130 135 140  
 Arg Gly Val Cys Asn Leu Glu Pro Cys Glu Tyr Asp Lys Asn Thr Gly  
 145 150 155 160  
 Leu Tyr Glu Glu Asp Cys Lys Phe Tyr Pro Asp Arg Asp Ile Leu Val  
 165 170 175  
 Glu Glu Ser Val Met Tyr Ala Gln Met Phe Glu Pro Val His Ala Phe  
 180 185 190  
 Cys Asp Ser Ser Ser His Asn Ser Glu Ala Pro  
 195 200

<210> 27  
 <211> 108  
 <212> PRT  
 <213> *Xenopus laevis*

<400> 27  
 Asp Ser Leu Val Gln Leu Lys Asn Asn Gly Tyr Glu Asp Ile Ile Ile  
 1 5 10 15  
 Ala Val Asn Pro Glu Val Pro Glu Asp Gly Lys Ile Ile Glu Gln Ile  
 20 25 30  
 Lys Lys Met Leu Thr Asp Ala Ser Ser Tyr Leu Phe Gln Ala Thr Lys  
 35 40 45  
 Lys Arg Ile Tyr Ile Arg Ser Ala Lys Ile Leu Ile Pro Asn Ser Trp  
 50 55 60  
 Thr Ser Asn Ser Ser Tyr Gly Arg Pro Lys Leu Glu Ser Tyr Asp Lys  
 65 70 75 80  
 Ala Asp Val Ile Val Ala Ser Pro Phe Ile His Gly Asp Asp Pro Tyr  
 85 90 95  
 Thr Leu Pro Val Trp Arg Leu Trp Arg Lys Gly Lys  
 100 105

<210> 28  
 <211> 124  
 <212> PRT  
 <213> *Xenopus laevis*

<400> 28  
 Ala Thr Arg Cys Pro Leu Lys Met Gln Gly Ser Tyr Leu Ile Glu Val  
 1 5 10 15  
 Cys Gln Arg Gly Ile Cys Asn Leu Glu Ala Cys Glu Tyr Asp Glu Asn  
 20 25 30  
 Thr Gly Leu Tyr Glu Glu Asp Cys Lys Phe Tyr Pro Lys Met Asp Ser  
 35 40 45  
 Asn Val Glu Glu Ser Val Met Tyr Ala Gln Met Met Glu Pro Val His  
 50 55 60  
 Ala Phe Cys Asn Ser Ser Ser His Asn Ser Glu Ala Pro Asn Gln Gln  
 65 70 75 80  
 Asn Arg Leu Cys Ser Gln Gln Ser Thr Trp Asp Val Ile Ser Lys Ser  
 85 90 95  
 Ser Asp Ile Gln Ser Ser Pro Pro Leu Met Asp Ser Asn Ile Pro Ala  
 100 105 110  
 Pro Val Val Ser Leu Leu Gln Tyr Lys Asp Arg Val  
 115 120

<210> 29  
 <211> 96  
 <212> PRT  
 <213> *Xenopus tropicalis*

<400> 29  
 Asp Ser Leu Val Gln Leu Lys Asn Asn Gly Tyr Glu Asp Ile Ile Ile  
 1 5 10 15  
 Ala Val Asn Pro Gln Val Pro Glu Asp Gly Lys Ile Ile Glu Asn Ile  
 20 25 30  
 Lys Lys Met Leu Thr Asp Ala Ser Ser Tyr Leu Phe Gln Ala Thr Lys  
 35 40 45  
 Lys Arg Leu Tyr Ile Arg Ser Ala Lys Ile Leu Ile Pro Asn Thr Trp  
 50 55 60  
 Ala Thr Asn Ser Ser Tyr Gly Arg Pro Lys Leu Glu Ser Tyr Asp Lys  
 65 70 75 80  
 Ala Asp Val Ile Val Ala Pro Pro Phe Val Gln Arg Asp Asp Pro Tyr  
 85 90 95

<210> 30  
 <211> 201  
 <212> PRT  
 <213> *Rattus norvegicus*

<400> 30  
 Gly Arg Asp Glu Pro Tyr Thr Arg Gln Phe Thr Lys Cys Gly Lys Lys  
 1 5 10 15  
 Ala Glu Tyr Ile His Phe Thr Pro Asp Phe Val Leu Gly Arg Lys Gln  
 20 25 30  
 Lys Glu Tyr Gly Asp Ser Gly Arg Leu Leu Val His Glu Trp Ala His

		35					40					45			
Leu	Arg	Trp	Gly	Val	Phe	Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr
	50					55					60				
Ser	Ala	Ser	Ser	Lys	Lys	Ile	Glu	Ala	Thr	Arg	His	Val	Leu	Thr	Pro
65					70					75					80
Lys	Cys	Ser	Thr	Gly	Ile	Lys	Gly	Met	Asn	Lys	Ala	Gln	Val	Cys	Gln
				85					90					95	
Gly	Gly	Ser	Cys	Ile	Thr	Arg	Asn	Cys	Arg	Arg	Asn	Ser	Thr	Thr	Gln
			100					105					110		
Leu	Tyr	Glu	Lys	Asp	Cys	Gln	Phe	Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu
		115					120					125			
Lys	Ser	Ser	Ile	Met	Phe	Met	Gln	Ser	Ile	Asp	Ser	Val	Thr	Glu	Phe
	130					135					140				
Cys	Lys	Lys	Glu	Asn	His	Asn	Arg	Glu	Ala	Pro	Thr	Leu	His	Asn	Gln
145					150					155					160
Lys	Cys	Asp	Tyr	Arg	Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp
			165						170					175	
Phe	Lys	Asn	Ser	Thr	Pro	Met	Glu	Met	Pro	Pro	Ser	Pro	Pro	Phe	Phe
			180					185					190		
Ser	Leu	Leu	Arg	Ile	Ser	Glu	Arg	Ile							
		195					200								

```
<210> 31
<211> 333
<212> PRT
<213> Rattus norvegicus
```

<400>	31																		
Val	Lys	Ser	Ser	Lys	Val	His	Leu	Asn	Asn	Asn	Gly	Tyr	Glu	Gly	Val				
1				5					10					15					
Val	Ile	Ala	Ile	Asn	Pro	Ser	Val	Pro	Glu	Asp	Glu	Arg	Leu	Ile	Pro				
			20					25					30						
Ser	Leu	Lys	Ala	Lys	Cys	Leu	Gly	Arg	Ser	Gly	Val	Leu	Ser	Gly	Ala				
		35					40					45							
Glu	Asn	His	Glu	Leu	Ser	Ser	Arg	Ala	Leu	Cys	Cys	Trp	Gly	Cys	Phe				
	50					55					60								
Gly	Phe	Leu	Ala	Val	Pro	His	Asn	Ala	Ala	Tyr	Thr	Ala	Asp	His	Lys				
65					70					75					80				
Gly	Asn	Gln	Ala	Asp	Val	Ile	Val	Ala	Asp	Pro	His	Leu	Lys	Tyr	Gly				
				85					90					95					
Asp	Asp	Pro	Tyr	Thr	Leu	Gln	Tyr	Gly	Gln	Cys	Gly	Asp	Arg	Gly	Gln				
			100					105					110						
Tyr	Ile	His	Phe	Thr	Pro	Asn	Phe	Leu	Leu	Ile	Asp	Asn	Leu	Ile	Ile				
		115					120					125							
Tyr	Gly	Pro	Arg	Gly	Arg	Val	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg				
	130					135					140								
Trp	Gly	Val	Phe	Asp	Glu	Tyr	Asn	Lys	Glu	Arg	Pro	Phe	Tyr	Leu	Ser				
145				150						155				160					
Arg	Lys	Asn	Val	Val	Glu	Ala	Thr	Arg	Cys	Ser	Thr	Asp	Ile	Thr	Gly				
				165					170					175					
Thr	Asn	Val	Val	His	Glu	Cys	Gln	Gly	Gly	Ser	Cys	Val	Thr	Arg	Lys				
		180						185					190						
Cys	Arg	Arg	Asp	Ser	Lys	Thr	Gly	Leu	Pro	Glu	Pro	Lys	Cys	Thr	Phe				
		195					200					205							
Ile	Pro	Asn	Lys	Ser	Gln	Thr	Ala	Arg	Ala	Ser	Ile	Met	Phe	Leu	Gln				

210	215	220
Ser Leu Asp Ser Arg Arg Met Ile Phe Tyr Gly Gly Ile Lys Lys Cys		
225	230	235
Val Leu Asn Lys Arg Gln Glu Met Gly Leu Asn Leu Gln Ser Tyr Lys		240
	245	250
Ala Arg Val Leu Gly Phe Ser Pro Leu Tyr Phe Gly Arg Met Val Val		255
	260	265
Glu Phe Cys Thr Glu Lys Thr His Asn Thr Glu Ala Pro Asn Leu Gln		270
	275	280
Asn Lys Ile Cys Asn Gly Arg Ser Thr Trp Asp Val Ile Lys Glu Ser		285
	290	295
Ala Asp Phe Gln His Ala Pro Pro Met Arg Gly Thr Glu Ala Pro Pro		300
305	310	315
Pro Pro Thr Phe Ser Leu Leu Lys Ser Arg Gln Arg Val		320
	325	330

<210> 32  
 <211> 335  
 <212> PRT  
 <213> Rattus norvegicus

<400> 32  
 Met Val Pro Val Leu Lys Val Leu Leu Phe Leu Thr Leu His Leu Leu  
 1 5 10 15  
 Gln Asp Thr Lys Ser Phe Lys Val His Leu Asn Asn Asn Gly Tyr Glu  
 20 25 30  
 Gly Val Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp Glu Arg Leu  
 35 40 45  
 Ile Pro Ser Leu Lys Glu Met Val Thr Gln Ala Ser Thr Tyr Leu Phe  
 50 55 60  
 Glu Ala Ser Gln Gly Arg Phe Tyr Phe Arg Asn Val Ser Ile Leu Val  
 65 70 75 80  
 Pro Met Thr Trp Lys Ser Lys Ser Glu Tyr Leu Met Pro Lys Arg Glu  
 85 90 95  
 Ser Tyr Asp Lys Ala Asp Val Ile Val Ala Asn Ser His Leu Lys Tyr  
 100 105 110  
 Gly Asp Asn Pro Tyr Thr Leu Gln Tyr Gly Gln Cys Gly Asp Arg Gly  
 115 120 125  
 Arg Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Thr Asp Asn Val Arg  
 130 135 140  
 Asn Tyr Gly Pro Arg Gly Arg Val Phe Val His Glu Trp Ala His Leu  
 145 150 155 160  
 Arg Trp Gly Val Phe Asp Glu Tyr Asn Glu Asp Arg Pro Phe Tyr Ile  
 165 170 175  
 Ser Gly Lys Asn Thr Ile Glu Val Thr Arg Tyr Leu Cys Glu Leu Ser  
 180 185 190  
 Asp Ser Thr Thr Ser Tyr Leu Arg Val Phe Ser Arg Pro Tyr Arg Ala  
 195 200 205  
 Val Gln Val Thr Gly Cys Ser Thr Asp Ile Lys Gly Ser Lys Ala Val  
 210 215 220  
 His Glu Arg Gln Arg Gly Ser Asp Val Thr Arg Leu Cys Arg Trp Asp  
 225 230 235 240  
 Ser Arg Thr Gly Leu Tyr Glu Pro Lys Cys Lys Phe Phe Pro Asp Lys  
 245 250 255  
 Ile Gln Thr Ala Arg Ala Ser Ile Met Phe Met Gln Asn Leu Asn Ser  
 260 265 270



```

Val Val Glu Phe Cys Thr Glu Lys Thr His Asn Thr Glu Ala Pro Asn
      275                280                285
Leu Gln Asn Lys Ile Cys Asn Gly Arg Ser Thr Trp Asp Val Ile Lys
      290                295                300
Glu Ser Ala Asp Phe Gln Gln Ala Pro Pro Met Arg Gly Thr Glu Ala
305                310                315                320
Pro Pro Pro Pro Thr Phe Ser Leu Leu Lys Ser Arg Gln Arg Val
      325                330                335

```

```

<210> 33
<211> 307
<212> PRT
<213> Rattus norvegicus

```

```

<400> 33
Met Gly Ser Leu Lys Ser Pro Val Phe Leu Leu Val Leu Tyr Leu Leu
1      5      10      15
Glu Gly Val Leu Ser Asn Ser Leu Ile Gln Leu Asn Asn Asn Gly Tyr
      20      25      30
Glu Gly Ile Val Ile Ala Ile Asp His Asp Val Pro Glu Asp Glu Ala
      35      40      45
Leu Ile Gln Arg Ile Lys Asp Met Val Thr Gln Ala Ser Pro Tyr Leu
      50      55      60
Phe Glu Ala Thr Gly Lys Arg Phe Tyr Phe Lys Asn Val Ala Ile Leu
65      70      75      80
Ile Pro Glu Asn Trp Asn Thr Lys Pro Glu Tyr Lys Arg Pro Lys Leu
      85      90      95
Glu Thr Leu Lys Asn Ala Asp Val Leu Val Ser Thr Met Ser Pro Ile
      100     105     110
Gly Asn Asp Glu Pro Tyr Thr Glu His Ile Gly Ala Cys Gly Glu Arg
      115     120     125
Gly Ile Arg Ile His Leu Thr Pro Asp Phe Leu Ala Gly Lys Lys Gln
      130     135     140
Thr Glu Tyr Gly Pro Gln Asp Arg Thr Phe Val His Glu Trp Ala His
145     150     155     160
Phe Arg Trp Gly Val Phe Asp Glu Tyr Asn Asn Asn Glu Lys Phe Tyr
      165     170     175
Leu Ser Asn Gly Lys Pro Gln Ala Val Arg Cys Ser Ala Thr Ile Thr
      180     185     190
Gly Lys His Val Val Arg Arg Cys Gln Gly Gly Ser Cys Val Thr Asn
      195     200     205
Gly Lys Cys Val Ile Asp Arg Val Thr Gly Leu Tyr Lys Asp Asn Cys
      210     215     220
Val Phe Ile Pro Asp Lys Asn Gln Arg Glu Lys Ala Ser Ile Met Phe
225     230     235     240
Asn Gln Asn Ile Asn Ser Val Val Glu Phe Cys Thr Glu Lys Asn His
      245     250     255
Asn Lys Glu Ala Pro Asn Ala Gln Asn Gln Arg Cys Asn Leu Arg Ser
      260     265     270
Thr Trp Glu Val Ile Gln Glu Ser Glu Asp Phe Lys Gln Thr Thr Pro
      275     280     285
Met Thr Ala Gln Pro Pro Ala Pro Thr Phe Ser Leu Leu Gln Thr Arg
      290     295     300
Gln Arg Ile
305

```

<210> 34  
 <211> 279  
 <212> PRT  
 <213> Rattus norvegicus

<400> 34  
 Leu Lys Leu Lys Glu Asn Gly Tyr Asp Gly Leu Leu Val Ala Ile Asn  
 1 5 10 15  
 Pro Arg Val Pro Glu Asp Leu Lys Leu Ile Arg Asn Ile Gln Glu Met  
 20 25 30  
 Ile Thr Glu Ala Ser Phe Tyr Leu Phe Asn Ala Thr Lys Arg Arg Val  
 35 40 45  
 Phe Phe Arg Ser Val Gln Ile Leu Ile Pro Ala Thr Trp Thr Ala His  
 50 55 60  
 Asn Tyr Ser Arg Val Lys Gln Glu Ser Phe Asp Lys Ala Asn Val Leu  
 65 70 75 80  
 Val Thr Glu Gln Asn Gly Val Pro Gly Glu Asp Pro Tyr Thr Leu Gln  
 85 90 95  
 His Arg Gly Cys Gly Gln Glu Gly Lys Tyr Ile His Phe Thr Pro Asn  
 100 105 110  
 Phe Leu Leu Asn Asp Glu Leu Ala Ala Gly Tyr Gly Ser Arg Gly Arg  
 115 120 125  
 Val Phe Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe Asp Glu  
 130 135 140  
 Tyr Asn Ser Asp Lys Pro Phe Tyr Val Asn Gly Arg Asn Glu Ile Gln  
 145 150 155 160  
 Val Thr Arg Cys Ser Ser Asp Ile Thr Gly Val Phe Val Cys Glu Lys  
 165 170 175  
 Gly Leu Cys Pro His Glu Asp Cys Ile Ile Ser Lys Leu Phe Arg Glu  
 180 185 190  
 Gly Cys Thr Phe Leu Tyr Asn Ser Thr Gln Ser Ala Thr Gly Ser Ile  
 195 200 205  
 Met Phe Met Gln Ser Leu Pro Ser Val Val Glu Phe Cys Asn Glu Gly  
 210 215 220  
 Thr His Asn Arg Glu Ala Pro Asn Leu Gln Asn Arg Val Cys Ser Leu  
 225 230 235 240  
 Arg Ser Thr Trp Asp Val Ile Thr Gly Ser Ser Asp Leu Asn His Ser  
 245 250 255  
 Leu Pro Val Leu Gly Val Glu Leu Pro Ala Pro Pro Ser Phe Ser Leu  
 260 265 270  
 Leu Gln Ala Gly Asp Arg Val  
 275

<210> 35  
 <211> 246  
 <212> PRT  
 <213> Rattus norvegicus

<400> 35  
 Met Gly Phe Ser Arg Gly Ile Val Phe Leu Leu Leu Leu Tyr Leu Leu  
 1 5 10 15  
 Gln Gly Ser Asp Thr Ser Leu Val Lys Leu Asn Glu Asn Gly Tyr Glu  
 20 25 30  
 Asp Ile Ile Ile Ala Ile Asp Pro Ala Val Ser Glu Asp Val Thr Ile  
 35 40 45

```

Ile Asp Gln Ile Lys Asp Met Val Thr Lys Ala Ser Ala Tyr Leu Phe
  50                      55                      60
Glu Ala Thr Glu Lys Arg Phe Phe Phe Lys Asn Val Ser Ile Leu Ile
  65                      70                      75                      80
Pro Glu Asn Trp Thr Asn Ser Asp Gln Tyr Arg Arg Pro Lys Gln Glu
                      85                      90                      95
Ser Tyr Lys His Ala Asp Ile Lys Val Ala Pro Pro Ala Leu Gln Gly
                      100                      105                      110
Arg Asp Glu Pro Tyr Thr Arg Gln Phe Thr Lys Cys Gly Lys Lys Ala
                      115                      120                      125
Glu Tyr Ile His Phe Thr Pro Asp Phe Val Leu Gly Arg Lys Gln Lys
                      130                      135                      140
Glu Tyr Gly Asp Ser Gly Arg Leu Leu Val His Glu Trp Ala His Leu
  145                      150                      155                      160
Arg Trp Gly Val Phe Asp Glu Tyr Asn Glu Asp Gln Pro Phe Tyr Ser
                      165                      170                      175
Ala Ser Ser Lys Lys Ile Glu Ala Thr Arg Cys Ser Thr Gly Ile Lys
                      180                      185                      190
Gly Met Asn Lys Ala Gln Val Cys Gln Gly Gly Ser Cys Ile Thr Arg
                      195                      200                      205
Asn Cys Arg Arg Asn Ser Thr Thr Gln Leu Tyr Glu Lys Asp Cys Gln
                      210                      215                      220
Phe Phe Pro Asp Lys Val Gln Thr Glu Lys Ser Ser Ile Met Phe Met
  225                      230                      235                      240
Gln Ser Ile Asp Ser Val
                      245

```

```

<210> 36
<211> 308
<212> PRT
<213> Rattus norvegicus

```

```

<400> 36
Met Val Pro Val Leu Lys Val Leu Leu Phe Leu Thr Leu His Leu Leu
  1                      5                      10                      15
Gln Asp Thr Lys Ser Phe Lys Val His Leu Asn Asn Asn Gly Tyr Glu
                      20                      25                      30
Gly Val Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp Glu Arg Leu
                      35                      40                      45
Ile Pro Ser Leu Lys Glu Met Val Thr Gln Ala Ser Thr Tyr Leu Phe
  50                      55                      60
Glu Ala Ser Gln Gly Arg Phe Tyr Phe Arg Asn Val Ser Ile Leu Val
  65                      70                      75                      80
Pro Met Thr Trp Lys Ser Lys Ser Glu Tyr Leu Met Pro Lys Arg Glu
                      85                      90                      95
Ser Tyr Asp Lys Ala Asp Val Ile Val Ala Asn Ser His Leu Lys Tyr
                      100                      105                      110
Gly Asp Asn Pro Tyr Thr Leu Gln Tyr Gly Gln Cys Gly Asp Arg Gly
                      115                      120                      125
Arg Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Thr Asp Asn Val Arg
                      130                      135                      140
Asn Tyr Gly Pro Arg Gly Arg Val Phe Val His Glu Trp Ala His Leu
  145                      150                      155                      160
Arg Trp Gly Val Phe Asp Glu Tyr Asn Glu Asp Arg Pro Phe Tyr Ile
                      165                      170                      175
Ser Gly Lys Asn Thr Ile Glu Val Thr Arg Cys Ser Thr Asp Ile Lys

```



<400> 38  
atgtcgacca tatgattcaa caaataaagg a 31

<210> 39  
<211> 33  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetically generated oligonucleotide

<400> 39  
atgcgccgc tcacttcttt actacatttg tac 33

<210> 40  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetically generated oligonucleotide

<400> 40  
catatgtcac tcattcagct gaacaac 27

<210> 41  
<211> 25  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> synthetically generated oligonucleotide

<400> 41  
catatggaag atgaaacact cattc 25

<210> 42  
<211> 32  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetically generated oligonucleotide

<400> 42  
gcggccgctc acttctttac tacatttgta cc 32

<210> 43  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>

<223> synthetically generated oligonucleotide

<400> 43

gcggccgctc acttgtttgg agcttctttg

30

<210> 44

<211> 6

<212> PRT

<213> Artifical Sequence

<220>

<223> synthetically generated oligonucleotide

<220>

<221> MISC\_FEATURE

<222> 1

<223> (7-methoxy-coumarin-4-yl)acetyl or Mca

<220>

<221> MISC\_FEATURE

<222> 6

<223> (2,4-dinitrophenyl)-L-2,3-diaminopropionyl or Dpa

<400> 44

Xaa Lys Ala Met His Xaa

1

5